

STATUS OF THE CLAIMS

This claim listing shall supercede any prior listing of the claims.

1-30 (Canceled)

31. (Previously presented) A composition comprising an active Clostridial neurotoxin joined to a neuropharmacological agent; wherein the active neurotoxin possesses mouse lethality of 3.3×10^5 LD₅₀/mg or greater and has binding specificity for a target nerve cell, is internalizable by the target nerve cell and has enzymatic activity for a target substrate selected from the group consisting of SNAP-25, VAMP, and Cellubrevin.

32. (Previously presented) The composition of claim 31 wherein the active Clostridial neurotoxin is an active botulinum neurotoxin.

33. (Canceled)

34. (Previously presented) The composition of claim 31 wherein said neuropharmacological agent is an intracellular acting drug.

35. (Previously presented) The composition of claim 32 wherein said Clostridial neurotoxin is selected from the group consisting of a botulinum toxin A, a botulinum toxin

B, a botulinum toxin C1, a botulinum toxin D, a botulinum toxin E, a botulinum toxin F, and a botulinum toxin G.

36. (Previously presented) The composition of claim 31 wherein said neuropharmacological agent is selected from the group consisting of a protein synthesis toxin, an inhibitor of neurotransmitter release, neuronal calcium channel blocker, a ribozyme and an oligonucleotide.

37. (Previously presented) The composition of claim 31 wherein the active Clostridial neurotoxin is an active tetanus neurotoxin.

38. (Previously presented) A pharmaceutical composition for treatment of a neuromuscular dysfunction in a mammal, comprising an active Clostridial neurotoxin joined to a neuropharmacological agent; and a pharmaceutically acceptable excipient; wherein the active neurotoxin possesses mouse lethality of 3.3×10^5 LD₅₀/mg or greater and has binding specificity for a target nerve cell, is internalizable by the target nerve cell and has enzymatic activity for a target substrate selected from the group consisting of SNAP-25, VAMP and Cellubrevin.

39. (Previously presented) The pharmaceutical composition of claim 38 wherein the active Clostridial neurotoxin is an active botulinum neurotoxin.

40. (Previously presented) The pharmaceutical composition of claim 38 wherein the active Clostridial neurotoxin is selected from the group consisting of a botulinum toxin A, a botulinum toxin B, a botulinum toxin C1, a botulinum toxin D, a botulinum toxin E, a botulinum toxin F, and a botulinum toxin G.
41. (Previously presented) The composition of claim 38 wherein the active Clostridial neurotoxin is an active tetanus neurotoxin.
42. (Previously presented) The pharmaceutical composition of claim 38 wherein the neuromuscular dysfunction is characterized by uncontrollable muscle spasms.
43. (Previously presented) The composition of either of claims 31 or 38 wherein the neuropharmacological agent is an inhibitor of neurotransmitter release.
44. (Previously presented) The composition of either of claims 31 or 38 wherein the neuropharmacological agent is an active ingredient for treatment of botulism or tetanus.
45. (Previously presented) The composition of either of claims 31 or 38 wherein the neuropharmacological agent is selected from the group consisting of a GABA agonist, a neuronal calcium channel agonist, an adenosine agonist, a glutamate antagonist, a protein synthesis toxin, a zinc-dependent protease inhibitor, a neuronal growth factor, an

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antiviral agent, a nicotinic antagonist, a neuronal calcium channel blocker, an acetylcholine esterase inhibitor, a potassium channel activator, a vasamicol inhibitor, a ribozyme and a transcribable gene.